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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/623,866

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Yoshihiro Kato

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EXAMINER

LUND, JEFFRIE ROBERT

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/623,866	Applicant(s) KATO ET AL.	
	Examiner Jeffrie R. Lund	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5 and 7-24 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 13-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7,8,10-12,20,23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-3, 7, 8, 10-12, 20, 23, and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 1-3, 7, 8, 10-12, 20, and 23, claim 1 is based on a two disk system as shown in figures 5-8. The newly added limitation is not part of the second diffusion portion which is defined by holes 55 and groove 57 in the second disk, is supplied by gas diffused in the first diffusion portion, and supplies gas to the end area. The Examiner believes Applicant is trying to claim the grooves 50a and 50b (figure 5 and 6). If this is correct, these grooves are part of the first diffusion portion, and the claim should be amended such that the grooves are part of the first disk 40 and first diffusion portion. If Applicant is trying to claim grooves 53a, 53b (figure 5 and 8), these grooves are not part of the first or second diffusion portions but are part of gas supply to the center area. The first and second diffusion portions supply gas to the end portion, and the claim should be amended so that the grooves are not part of the first or second diffusion portion. Either of these amendments will place claims 1-3, 7, 8, 10-12, 20, and

23 in condition for allowance.

The first and second diffusion portion of claim 24 is based on a single disk system shown in figures 2-4. The partition and gas supply system of claim 24 is part of the gas supply system of figure 5. Therefore, claim 24 results in a hybrid embodiment that is not taught or suggested in the specification and drawings.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 10, 20, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Okase, US Patent 5,884,009.

Okase teaches a processing system that includes: a chamber containing a wafer W; a gas supply plate 5c, which has a plurality of gas holes 52b, and supplies a process gas into said chamber through the gas holes; a first diffusion portion Z2 (formed by partition 53a and the first disk 5a), which diffuses the gas parallel (horizontal) to a major surface; a second diffusion portion Z2 (formed by partitions 53b and the second disk 5b) which leads gas diffused by the first diffusion portion to the gas holes 52b and includes a groove in one side of the second disk which forms a hollow portion, and includes a partition member 53b which separates the hollow portion into a plurality of areas, including a center Z1 and end areas Z2. The gas flows in mutually independent gas flow paths to the center or end areas of the chamber and the flow rates can be

independently controlled. The gas is supplied from a single source. (Figure 3)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okase, US Patent 5,884,009.

Okase was discussed above and includes all the structure elements claimed in claims 2 and 3.

Okase differs from the present invention in that Okase does not teach the exact arrangement of the grooves and holes in the first and second disks.

It has been held that the rearrangement of parts is obvious (see *In re Japikse* 86 USPQ 70).

The motivation for rearranging the location the grooves and holes of Okase is to provide an alternated arrangement of the grooves and holes in the disks of Okase.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the grooves and holes of Okase.

8. Claims 7, 8, and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okase, US Patent 5,884,009, in view of Fujikawa et al, US Patent 5,595,606.

Okase differs from the present invention in that Okase does not teach that the first diffusion portion is a plurality of linear holes formed by boring and sealing the end portion of each hole.

Fujikawa et al teaches linear holes diffusion portions made by boring the linear holes and sealing the ends of the holes (column 6 lines 47-55).

The motivation for making the grooves of Okase linear holes is to provide an alternate means of making the apparatus of Okase.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the grooves of Okase by boring and sealing the ends of the bores as taught by Fujikawa et al.

Allowable Subject Matter

9. Claims 21 and 22 are allowed.

10. The following is an examiner's statement of reasons for allowance: the process system as claimed by claim 21 in its entirety was not found in or suggested by the art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

11. Applicant's arguments with respect to claims 1-3, 7, 8, 10-12, 20, 23, and 24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-

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1437. The examiner can normally be reached on Monday-Thursday (10:00 am - 9:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jeffrie R. Lund/
Primary Examiner, Art Unit 1792

JRL
3/3/08